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# Fast Projects That Are of Great Value

*Tangible Result Driver – Dave Nichols,  
Director of Program Delivery*

MoDOT customers expect that transportation projects be completed quickly and provide major improvements for travelers. MoDOT will honor project commitments because it believes in integrity.



## Fast Projects That Are of Great Value

### *Percent of estimated project cost as compared to final project cost*

**Result Driver:** Dave Nichols, Director of Program Delivery

**Measurement Driver:** Machelles Watkins, Transportation Planning Director

#### **Purpose of the Measure:**

This measure determines how close MoDOT's total program completion costs are to the estimated costs.

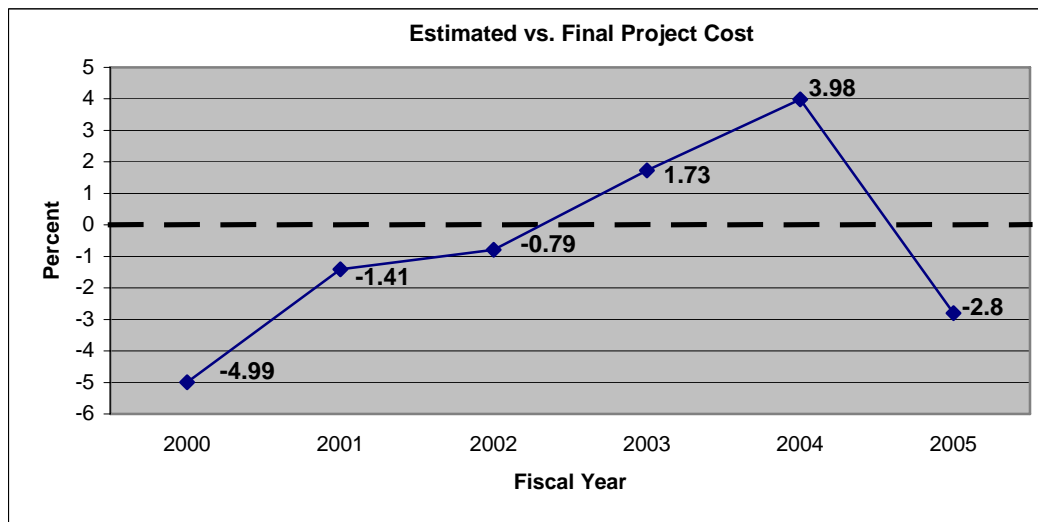
#### **Measurement and Data Collection:**

The department determines the completed project costs and compares them to the estimated costs. The completed project costs are reported during the state fiscal year in which the project is completed.

Project costs include design, right of way purchases, utilities, construction, inspection and other miscellaneous costs. The estimated cost is based on the amount included in the most recently approved Statewide Transportation Improvement Program. Completed costs include actual expenditures. Litigation filed on projects after a project has been completed will not be tracked by this method of data collection. However, this is a rare occurrence. Positive numbers indicate the final (completed) cost was higher than the estimated cost.

#### **Improvement Status:**

The cost trend through FY 2004 reflects the higher number of projects resulting from bonding in FY 2001, 2002 and 2003. The decrease in 2005 reflects the reduced number of projects without bonding. The ideal status is no deviation in the estimated vs. final project cost, or 0%.



**Desired  
Trend:**

N/A

*Positive numbers indicate the final (completed) cost was higher than the estimated cost.*

## Fast Projects That Are of Great Value

*Number of calendar days it takes to go from the programmed commitment on the Statewide Transportation Improvement Program to construction completion*

**Result Driver:** Dave Nichols, Director of Program Delivery

**Measurement Driver:** Machelles Watkins, Transportation Planning Director

**Purpose of the Measure:**

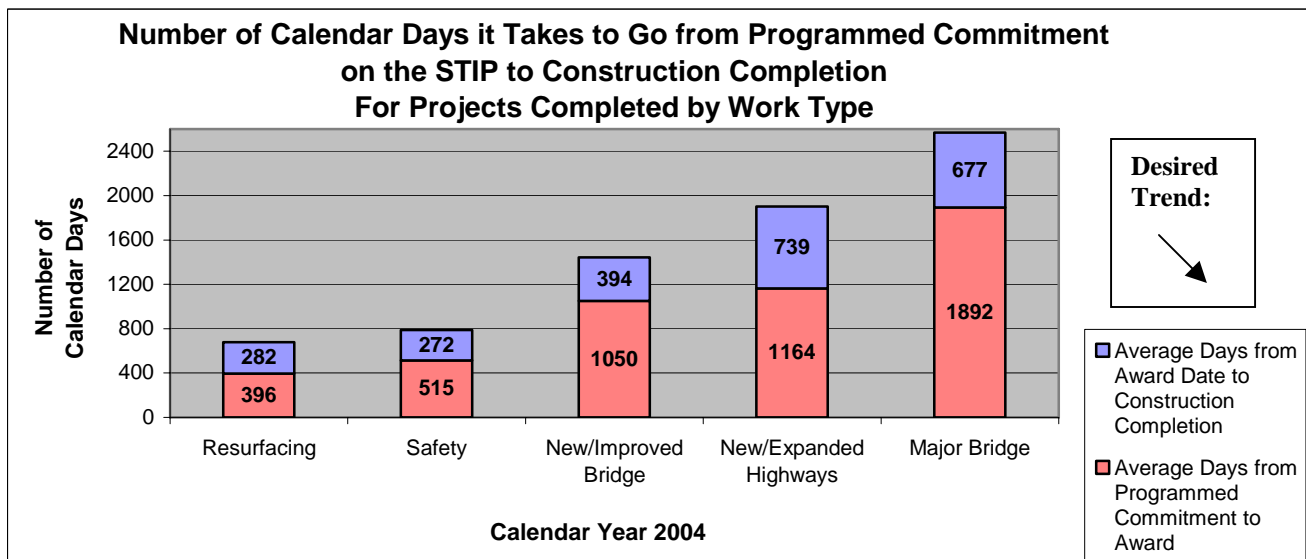
This measure determines how quickly projects go from the programmed commitment to construction completion. Customers perceive this time as 'project wait-time.'

**Measurement and Data Collection:**

MoDOT compares how long it takes from when the project is added to the Statewide Transportation Improvement Program to when the construction work is finished, and the public is using the new transportation improvement. Data is categorized by the type of work, and distinguishes between design and construction stages.

**Improvement Status:**

Of the projects completed in 2004, the quickest projects were resurfacing projects, which were completed in less than two years. The projects that took the longest time to complete are major bridge projects, which took about seven years. The construction phase (in blue) ranged from under one year for resurfacing projects to two years for new or expanded highways and major bridges. The design phase (in purple) generally took more time than construction, ranging from just over one year for resurfacing projects to just over five years for major bridges. Major bridges required much more time because of the complexity of the design work, the increased amount of public and other governmental agency involvement, the amount of environmental and cultural work required, the purchasing of right-of-way, and sometimes, the coordination with neighboring states.



## Fast Projects That Are Of Great Value

### *Percent of projects completed within budget*

**Result Driver:** Dave Nichols, Director of Program Delivery

**Measurement Driver:** Dave Ahlvers, State Construction Engineer

#### **Purpose of Measure:**

The measure tracks the percentage of projects completed within the programmed amount. The cost includes such items as engineering, right of way and contract payments.

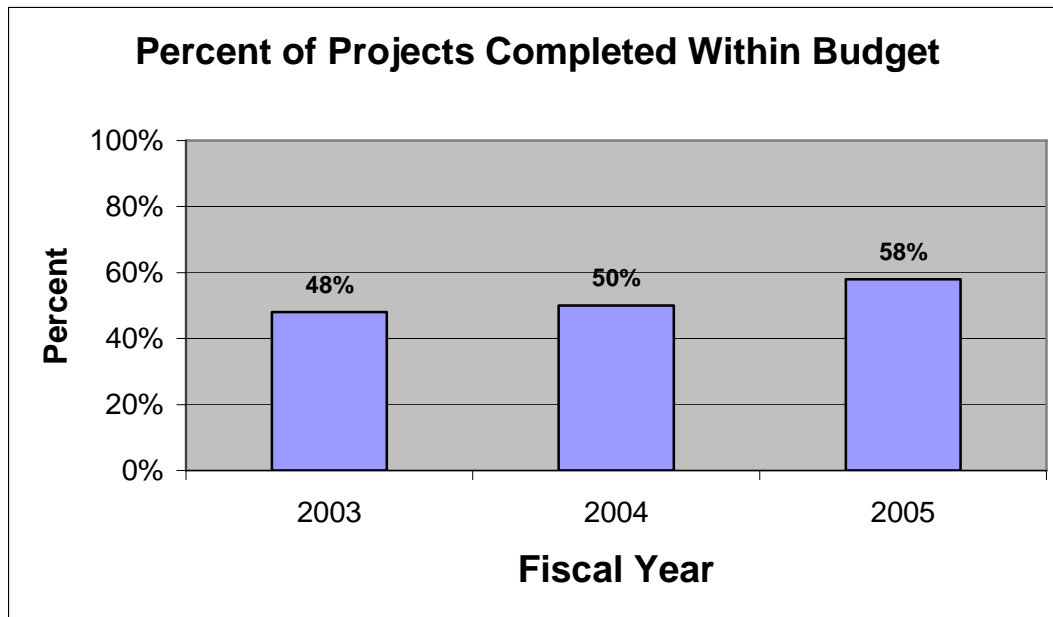
#### **Measurement and Data Collection:**

The completed project cost is compared to the estimated cost for each project. The percentage of projects completed within the estimated cost is gathered from across the state.

Project costs include design, right of way purchases, utilities, construction payments, inspection and other miscellaneous cost.

#### **Improvement Status:**

In 2005 MoDOT completed 58 percent of projects within the programmed amount, which represents an 8 percent increase from the previous year. The overall trend is positive, however, the department would like to see a greater percentage of our projects completed within programmed amount. The goal is to deliver projects as close to the programmed amount as possible allowing the greatest number of projects to be built with the funding available.



**Desired  
Trend:**



## Fast Projects That Are Of Great Value

### *Percent of projects completed on time*

**Result Driver:** Dave Nichols, Director of Program Delivery

**Measurement Driver:** Dave Ahlvers, State Construction Engineer

#### **Purpose of the Measure:**

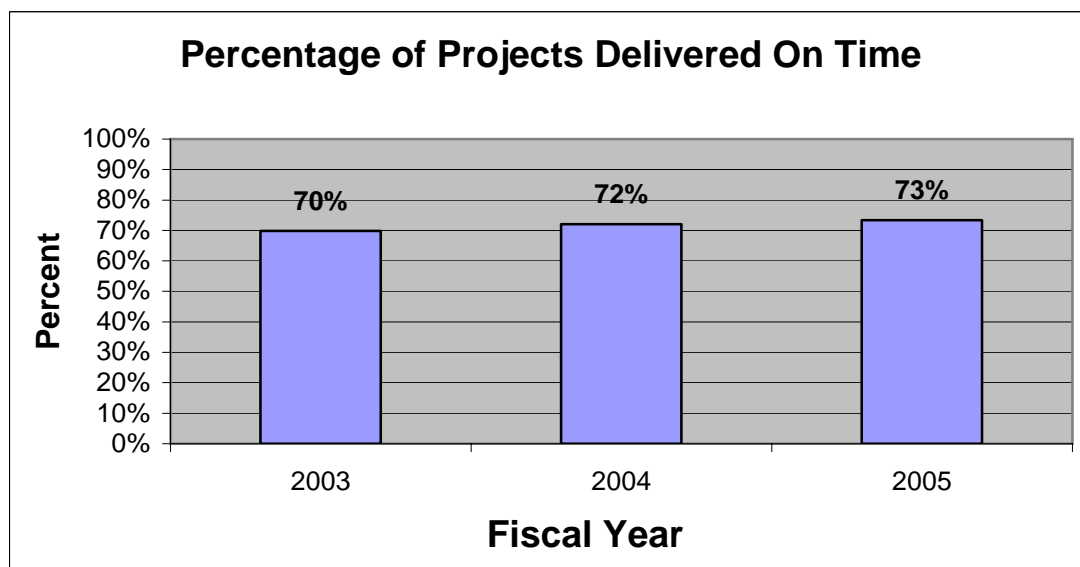
This measure tracks the percentage of projects completed by the commitment date established in the contract. It will indicate MoDOT's ability to complete projects by the agreed upon date.

#### **Measurement and Data Collection:**

The project manager will establish project completion dates for each project. This will be documented in MoDOT's SiteManager and STIP databases. It will be part of the Plans, Specifications & Estimates submittal. The actual completion date will be documented by the Resident Engineer and placed in MoDOT's Management System.

#### **Improvement Status:**

The results indicate that 73 percent of MoDOT projects were completed on time in 2005, a small increase from previous years. The department has focused on reducing days available for construction in order to reduce congestion and inconvenience to the traveling public. MoDOT will continue to challenge contractors by setting aggressive completion schedules, while continuing an upward trend of completing projects on time.



**Desired  
Trend:**



## Fast Projects That Are Of Great Value

### *Percent of change for finalized contracts*

**Result Driver:** Dave Nichols, Director of Program Delivery

**Measurement Driver:** Dave Ahlvers, State Construction Engineer

#### **Purpose of the Measure:**

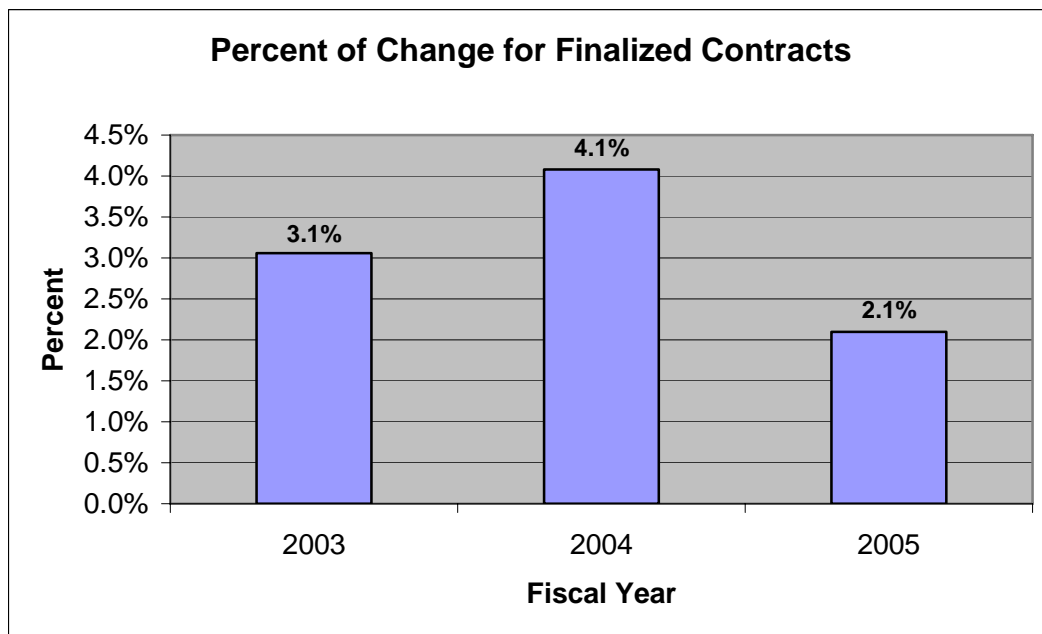
The measure tracks the percentage difference of total construction payouts to the original contract award amounts. This indicates how many changes are made on projects after they are awarded to the contractor.

#### **Measurement and Data Collection:**

Contractor payments are generated through MoDOT's SiteManager database and processed in the financial management system for payment. Change orders document the underrun/overrun of the original contract.

#### **Improvements Status:**

MoDOT's performance on this item in 2004 was 4.1 percent with a goal of 3 percent. Projects let after January 2005 will have a goal of 2 percent. In 2005 performance improved to 2.1 percent, a significant improvement from the previous year. This improvement in one fiscal year results in a savings of \$15 million. By limiting overruns on contracts the department can deliver more projects, which will lead to an overall improvement in the entire highway system.



**Desired  
Trend:**

N/A

## Fast Projects That Are Of Great Value

### *Average construction cost per day by contract type*

**Result Driver:** Dave Nichols, Director of Program Delivery

**Measurement Driver:** Dave Ahlvers, State Construction Engineer

#### **Purpose of the Measure:**

This measure tracks the cost per day for project completion to determine the impact to the traveling public, enabling MoDOT to better manage project completion needs by using the best type of contract for a particular situation.

#### **Measurement and Data Collection:**

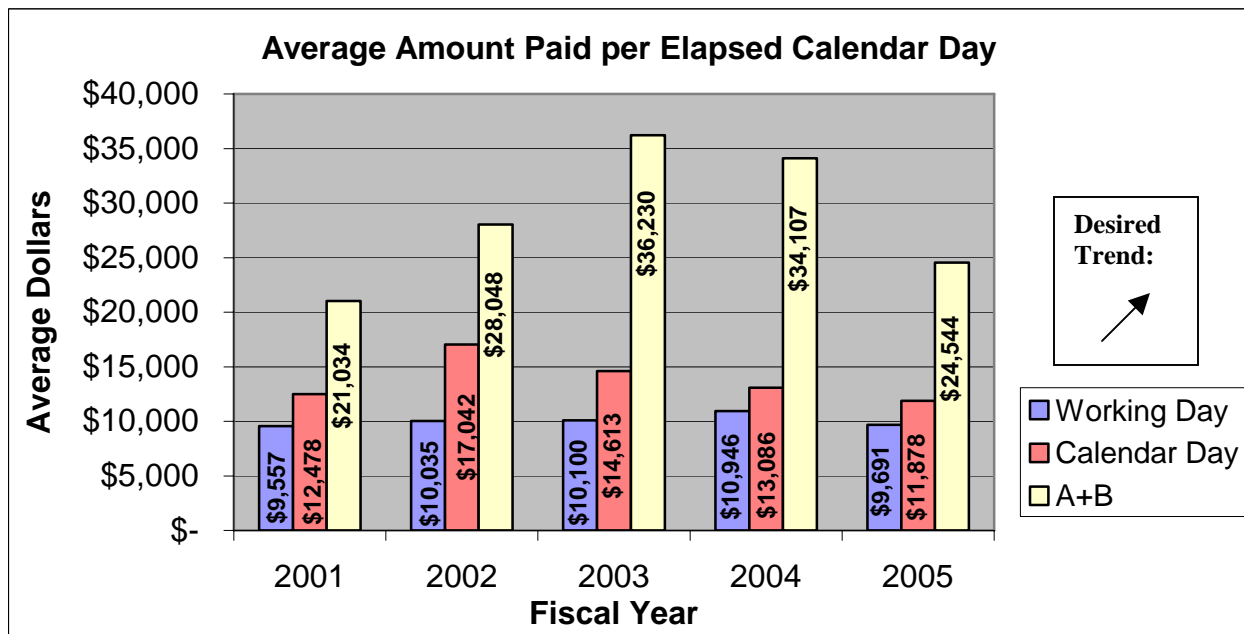
This information is gathered by extracting the actual time used for construction from the summary of working days in MoDOT's SiteManager database and dividing it by the total costs of the project.

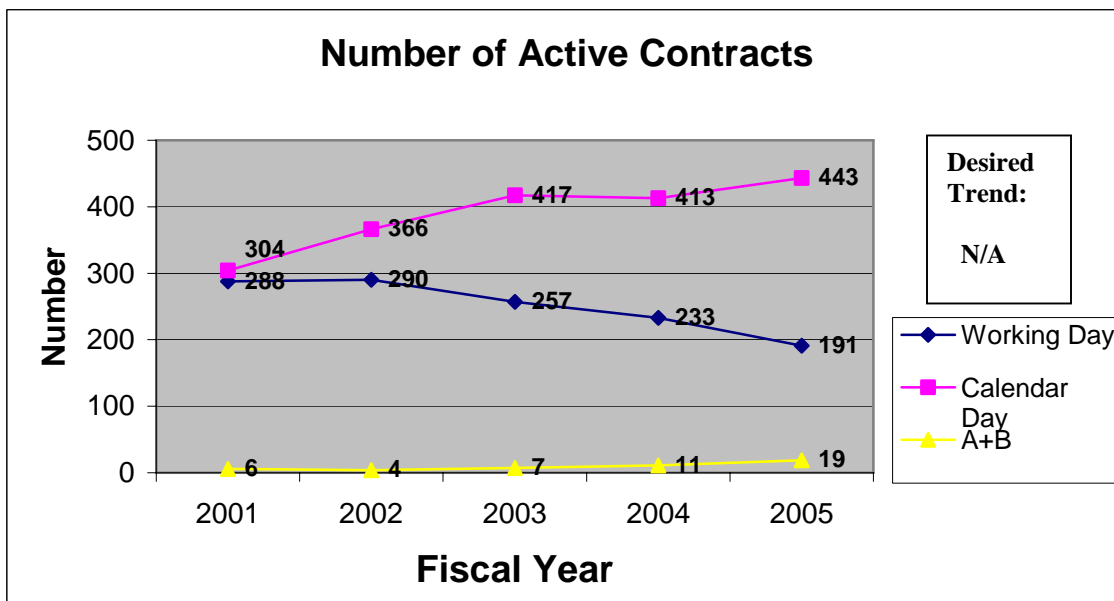
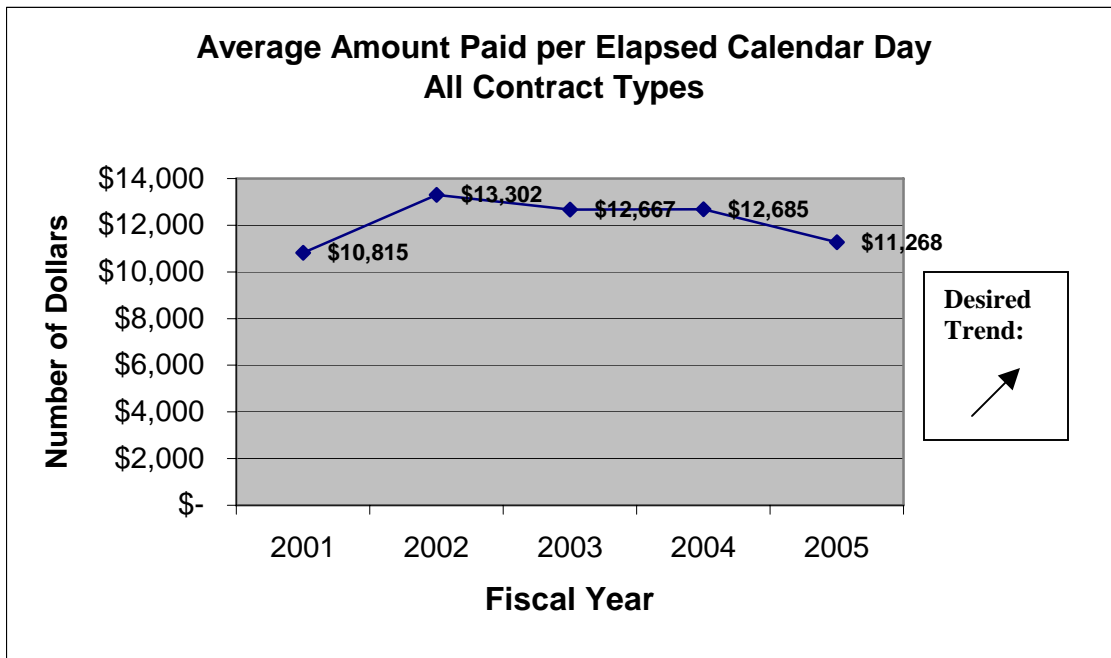
The measurement groups construction contracts into three categories:

- **WD** working day contracts
- **CD** calendar day contracts and;
- **A + B** or innovative contracts that provide incentives/disincentives to the contractor for early completion.

#### **Improvement Status:**

The data shows that A+B Contracts result in faster contract completion and fewer delays to the traveling public. MoDOT found that projects with established completion dates measured on a calendar day basis are completed faster than traditional working day contracts. In 2005 the average construction cost per day declined from the previous year. In 2005 it took more time to complete projects that amounted to a smaller value than in 2004. This is a trend we will strive to reverse in 2006 by increasing the use of innovative contracting techniques.





## Fast Projects That Are Of Great Value

### *Percent of customers that feel completed projects are the right transportation solutions*

**Result Driver:** Dave Nichols, Director of Program Delivery

**Measurement Driver:** Ernie Perry, Research, Development and Technology Director

**Purpose of the Measure:**

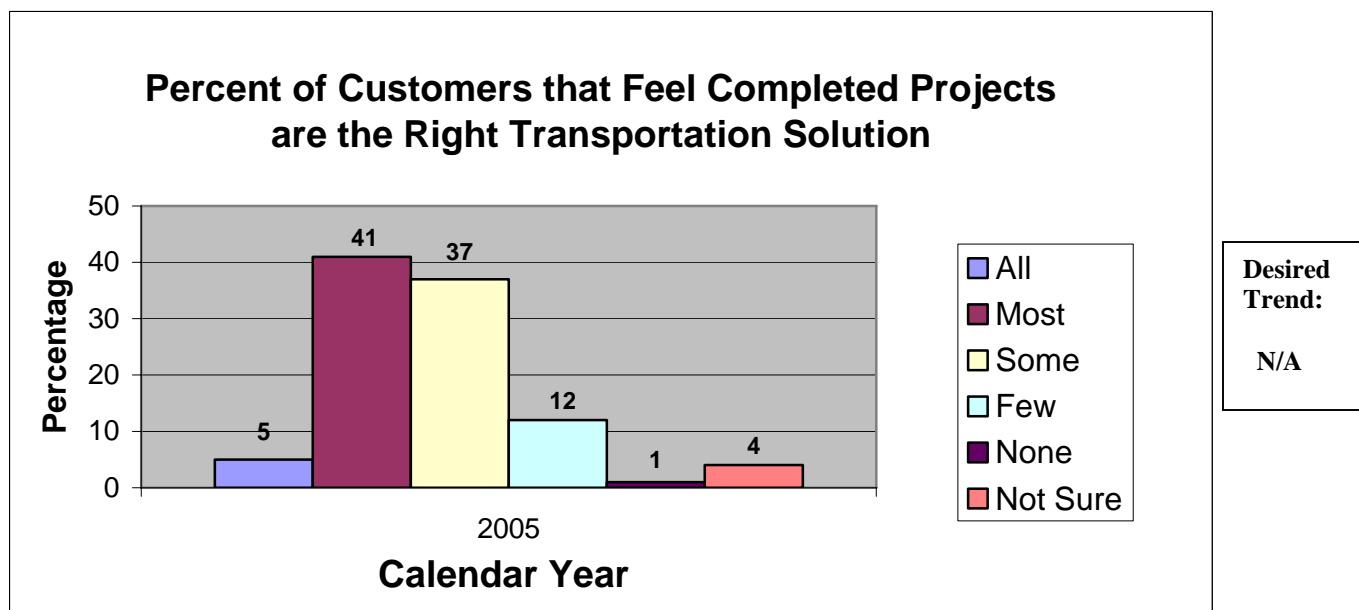
This measure provides information regarding the public's perception of MoDOT's performance in providing the right transportation solutions.

**Measurement and Data Collection:**

Data was collected through a statewide telephone survey conducted for the long-range planning initiative called *Missouri Advance Planning*. The survey effort included interviews with 3,100 Missourians with an overall margin of error of +/- 2.9 percent. This measure is under continuous development, and MoDOT is currently developing a sampling and survey methodology to measure public perception of individual projects.

**Improvement Status:**

Forty-six percent of the sample feels most or all of MoDOT's transportation solutions were the right solutions. Thirty-seven percent feels some of the projects were the right solutions, and 13 percent feels that few or none of the projects were the right solution to their transportation needs. While this is a positive starting point, MoDOT will further utilize community outreach and communication efforts to gain greater public support so that all projects are viewed as the right solution.



## Fast Projects That Are of Great Value

### *Percent of project timeliness as compared to other state DOTs*

**Result Driver:** Dave Nichols, Director of Program Delivery

**Measurement Driver:** Diane Heckemeyer, State Design Engineer

**Purpose of the Measure:**

This measure will track how MoDOT compares to other state Departments of Transportation with regards to project timeliness. The planning, design and construction process associated with a MoDOT project can be a lengthy one for a variety of reasons. MoDOT's customers do not understand the length of the process, often using this lack of understanding to form a negative view of the department. Comparing the time it takes for MoDOT to complete projects of a similar type with those from other DOTs will help demonstrate its level of performance to the public, could point out the need for greater educational efforts by the department and could add to the need for partnering and streamlining actions.

**Measurement and Data Collection:**

At the national level, a group of volunteer states will be participating in a prototype for comparative performance measures with regards to the topic of project delivery. Missouri has agreed to participate in this prototype. It is anticipated that data collection will begin Summer 2005.

In June, MoDOT completed a survey to be used by the AASHTO Standing Committee on Performance Measurement to develop the prototype program described above. The survey requested very specific information related to how each DOT defines its universe of contracts or projects for measuring performance, how it defines its performance measures, and the business rules, data fields and time horizons utilized to track performance.

**Improvement Status:**

**Measure is Under  
Development**

## **Fast Projects That Are of Great Value**

*Percent of projects that represent great value*

**Result Driver:** Dave Nichols, Director of Program Delivery

**Measurement Driver:** Diane Heckemeyer, State Design Engineer

**Purpose of the Measure:**

This measure will track how MoDOT projects provide great value once they are constructed and open to traffic. Once the measure is established and a baseline trend is available, it will show at what level MoDOT is providing projects of great value.

**Measurement and Data Collection:**

Defining “value” has proven to be an obstacle in the establishment of this measure – how should MoDOT define it ... how do other DOTs define it? The American Association of State Highways and Transportation Officials pilot project that is being developed in conjunction with Tracker Measure 9h could prove to be of benefit in further development of this measure as well. Further work on this definition will be a priority for staff during the current quarter.

**Improvement Status:**

**Measure is Under  
Development**

